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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,220	01/28/2000	Allison Joan Lennon	169.1595	1967

5514 7590 07/31/2002

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
PHAM, HUNG Q	
ART UNIT	PAPER NUMBER

2172

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

1. Applicants elected group I, claims 1-18, 32-53 67-741 and 74 without traverse in paper number 7, received on 06/07/20052. Claims 19-31, 54-66, 72-73 and 75-116 are withdraw from further consideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claim 1-18, 32-53, 67-71 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeRose et al. [USP 5,708,806].**

Regarding to claims 1, 36 and 71, DeRose teaches a method and system for generating a representation of an electronic document and navigating the electronic document using its representation and for displaying the electronic document on an output device. The electronic document is considered as an *electronically-accessible resource*. The system and method are used with electronic documents having descriptive markup as *the description*, which describes the content or meaning of the document rather than its appearance. Each markup element defines a node or element in a tree. The tree is represented by providing a unique identifier for each element and for accessing a *descriptor* of the element. An element descriptor preferably includes indications of the parent, first child, last child, left sibling, right sibling, type name and text location for the element. The document representation is used to facilitate navigation of the text for constructing navigational aids such as table of contents also full text indexing as *two axes of access to the resources* (abstract) and *descriptions have links to corresponding electronically-accessible resources* (Col. 8, lines 19-27). The DeRose method and system receives as its input a document, represented in electronic form, which includes text content, descriptive markup and possibly non-text content. The descriptive markup of an input document is interpretable as an ordered hierarchy of content objects as illustrated in FIG. 3 (Col. 7, line 60-Col. 8, line 7). This indicates the

step of *reading said descriptions*. DeRose teaches that in a document, an element, e.g. element 50 of FIG. 3, may have a parent element (52), a first child element (54), a last child element (56), a left sibling element (58), and a right sibling element (60). Because the right sibling of element 50 does not exist in the document, it is defined by "nil", or some non-element identifier. A document may also include other types of elements which do not describe function, meaning or appearance of the text. These types of elements include cross-referencing elements 62 which may be used to link relevant sections of a document or even separate documents. Artwork elements 64 may be used to point to non-text objects, such as graphic raster files, which also may be separate electronic documents (Col. 8, lines 8-27). The DeRose FIG. 5 is a representation of the tree structure generated from the sample SGML document of FIG. 4. Each element as *item* defined by the markup structure of the SGML such as BOOK, FRONT MATTER, TITLE, AUTHOR... is assigned a reference numbers, or element identifiers, to each element appearing in the document according to the order of appearance of these elements in the document. As shown in FIG. 6, the element directory 91 is used to improve navigation of the document. As shown in FIG. 12, the table of contents displaying items corresponding to an electronic document. As discussed above and in short, the DeRose technique indicates the step of *displaying items, wherein each item is associated with a corresponding said descriptor component of a said read description that has at least one said attribute*. As in the DeRose FIGS. 12-14, when the table of contents is displayed on the screen, the title for the first element in the table of contents file is displayed. A section of the table of contents may then be expanded, for example,

responsive to a mouse event or other indication by a user, by displaying the titles for any immediate sub-elements of a selected displayed element and for subsequent elements which were in the original display. The rendering of the text for the table of contents may be performed in the same manner as a document (Col. 17, lines 3-16). By using annotations as a structure for attaching information to a document, annotations may be made in a manner well known to hypertext systems, known as a web, a type of annotation list. A web is a possibly indexed list of anchor-sets. Each anchor-set represents a hypertext link between the anchors in the set. Each anchor refers to a location in a document and specifies a name for the data representation used by the document. The location in an anchor-set may be a document name, a markup tag in a document, a graphics file, another computer process, or other representations (Col. 23, line 57-Col. 24, line 30). In short, the DeRose rendering and annotation technique indicates the step of *browsing said descriptions of the resources and their corresponding electronically-accessible resources via said links using said displayed items*. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the DeRose method by combining the steps of reading description, displaying items and browsing descriptions in order to navigate an electronic document by using its representation.

Regarding to claims 2 and 37, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *description is represented by a tree of*

descriptor components, and one or more of said descriptor components have descriptor components as descendants (FIG. 3, Col. 7, line 60-Col. 8, line 27).

Regarding to claims 3 and 38, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *one of said axes of access is a table of contents classification* (Col. 16, line 44-Col. 17, line 16).

Regarding to claims 4 and 39, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *one of said axes of access is an index classification* (Col. 13, lines 4-19 and Col. 15, lines 24-30).

Regarding to claims 5 and 40, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *the descriptions of the resources have been generated using a description scheme as a template, and the description scheme uses a declarative description definition language which contains definitions for descriptor components of the said descriptions of the resources* (Col. 8, line 41-Col. 9, line 11).

Regarding to claims 6 and 41, DeRose teaches all the claimed subject matters as discussed in claim 5, and further discloses: *attributes of the descriptor components are defined in the description scheme* (Col. 8, line 41-Col. 9, line 11).

Regarding to claims 7 and 42, DeRose teaches all the claimed subject matters as discussed in claim 5, and further discloses: *attributes of the descriptor components are a persistent item of the description scheme* (Col. 8, line 41-Col. 9, line 11).

Regarding to claims 8 and 43, DeRose teaches all the claimed subject matters as discussed in claim 5, and further discloses: *attributes of the descriptor components are instantiated by an application when required* (Col. 8, line 41-Col. 9, line 11).

Regarding to claims 9 and 44, DeRose teaches all the claimed subject matters as discussed in claim 8, and further discloses: *attributes of the descriptor components are instantiated using a rule that is associated with the description scheme* (Col. 8, line 41-Col. 9, line 11).

Regarding to claims 10 and 45, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *the resource is an item of digital content* (Col. 8, lines 19-26).

Regarding to claims 11 and 46, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *the resource is an electronic document or resource available over the World Wide Web* (Col. 7, lines 60-66 and Col. 24, lines 4-18).

Regarding to claims 12 and 47, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *the resource is an electronic device* (FIG. 1, Col. 7).

Regarding to claims 13 and 48, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *the description of the resource contains links to identified sections of the resource* (FIG. 3, Col. 8).

Regarding to claims 14 and 49, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *axes of access are determined by rules operating on the description* (Col. 13, line 4-Col. 14, line 41 and Col. 16, lines 22-37).

Regarding to claims 15 and 50, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *axes of access are determined during the generation of the description of the resource* (Col. 12, lines 53-67).

Regarding to claims 16 and 51, DeRose teaches all the claimed subject matters as discussed in claim 1, and further discloses: *attributes of said descriptor components representative of said at least two axes of access are inferred from the content of the description* (FIG. 12).

Regarding to claims 17 and 52; DeRose teaches all the claimed subject matters as discussed in claim 16, and further discloses: *attribute of a said descriptor component is inferred to be a table of content descriptor if the said descriptor component contains a reference to a resource or a section of a resource* (FIG. 12).

Regarding to claims 18 and 53, DeRose teaches all the claimed subject matters as discussed in claim 17, and further discloses: *attribute of a said descriptor component is inferred to be an index descriptor if the said descriptor component is not inferred to be a table of contents descriptor* (FIG. 12).

Regarding to claims 32, 67 and 74, DeRose teaches a method and system for generating a representation of an electronic document, indexing and navigating the electronic document using its representation and for displaying the electronic document on an output device. The electronic document is considered as an *electronically-accessible resource*. The system and method are used with electronic documents having descriptive markup as *the description*, which describes the content or meaning of the document rather than its appearance. Each markup element defines a node or element in a tree. The tree is represented by providing a unique identifier for each element and for accessing a *descriptor* of the element. An element descriptor preferably includes indications of the parent, first child, last child, left sibling, right sibling, type name and text location for the element as *the association of a feature of said resource with representative value for that feature* (abstract and FIG. 6). The document representation

as *one or more of descriptor components* is used to facilitate navigation of the text for constructing navigational aids such as table of contents also full text indexing (abstract).

The DeRose method and system receives as its input a document, represented in electronic form, which includes text content, descriptive markup and possibly non-text content. The descriptive markup of an input document is interpretable as an ordered hierarchy of content objects as illustrated in FIG. 3 (Col. 7, line 60-Col. 8, line 7). This indicates the step of *reading said descriptions*. DeRose teaches that in a document, an element, e.g. element 50 of FIG. 3, may have a parent element (52), a first child element (54), a last child element (56), a left sibling element (58), and a right sibling element (60). Because the right sibling of element 50 does not exist in the document, it is defined by "nil", or some non-element identifier. A document may also include other types of elements, which do not describe function, meaning or appearance of the text. These types of elements include cross-referencing elements 62 which may be used to link relevant sections of a document or even separate documents. Artwork elements 64 may be used to point to non-text objects, such as graphic raster files, which also may be separate electronic documents (Col. 8, lines 8-27). The DeRose FIG. 5 is a representation of the tree structure generated from the sample SGML document of FIG.

4. Each element as *item* defined by the markup structure of the SGML such as BOOK, FRONT MATTER, TITLE, AUTHOR... is assigned a reference numbers, or element identifiers, to each element appearing in the document according to the order of appearance of these elements in the document. As shown in FIG. 6, the element directory 91 is used to improve navigation of the document. As shown in FIG. 12, the

table of contents displaying items corresponding to an electronic document. As discussed above and in short, the DeRose technique indicates the step of *displaying a table of contents containing table of content items, wherein each table of contents item is associated with a corresponding said descriptor component that has a table of contents attribute*. DeRose further discloses the step of *selecting one said displayed table of contents item for annotation* (Col. 22, line 65-Col. 23, line 39). The DeRose FIGS. 12-14 illustrates the step of *displaying an index containing index items* and DeRose further discloses *each said displayed index item is associated with a corresponding said descriptor component that has an index attribute and that is associated with the said selected table of contents item* (Col. 13, lines 43). As shown in LOOKUP WINDOW screen of FIG. 12, by *selecting one said displayed index item* such as "SHOES", the term is *associating said selected displayed index item with said selected table of contents item* as shown in TEXT VIEW screen. DeRose discloses another feature provided by the indexing and rendering methods that enables cumulative search statistics to be displayed in combination with the table of contents as shown in FIGS. 12-13 by instructing the system to search on a given word in a document. The elements in which the selected word occurs may be determined from the frequency record for the selected word. By providing a style sheet for the table of contents which directs the rendering process to examine a selected variable, e.g. "word", which may store a value indicative of a selected search word, when a table of contents then is displayed, the number of occurrences in the element corresponding to the item for the selected word may be retrieved from its frequency record and displayed. Thus, a user may know how many

times a word occurs in each section of a document whose table of contents item is displayed. A user may then determine relevant portions of the displayed document (Col. 17, lines 30-46). This technique indicates the steps of *choosing a said representative value for the selected index item; and associating said chosen representative value with said feature which corresponds to said selected index item, wherein said chosen representative value and its corresponding feature provide an annotation of the resource*. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the DeRose method by combining the steps of reading description, displaying table of contents and index, selecting displayed table of contents and index, associating index with table of contents item, choosing a representative value and associating representative value with feature in order to navigate an electronic document by using its representation.

Regarding to claims 33 and 68, DeRose teaches all the claimed subject matters as discussed in claim 32, and further discloses: *description is represented by a tree of descriptor components, and one or more of said descriptor components have descriptor components as descendants* (FIG. 3, Col. 7, line 60-Col. 8, line 27).

Regarding to claims 34 and 69, DeRose teaches all the claimed subject matters as discussed in claim 32, but fails to disclose the *step of associating said selected display index item is allowed only if the corresponding descriptor of said selected display index item is a valid descriptor for the table of contents item selected for annotation*. However, as shown

in FIG. 12, if a user enter a word is not in the document at LOOKUP WINDOW screen, the step of associating obviously will not be allowed. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the DeRose method by including the step of allowing in order to associate an index item with a table of content item.

Regarding to claim 35, DeRose teaches all the claimed subject matters as discussed in claim 32, and further discloses the *step of choosing a said representative value is predetermined* (Col. 17, lines 30-46).

Regarding to claim 70, DeRose teaches all the claimed subject matters as discussed in claim 67, and further discloses: *operation of said means for selecting one said table of contents item is optional and if not performed said means for displaying an index displays all said index items associated with all said table of contents items* (FIG. 12).

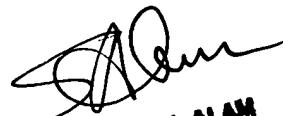
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Pham whose telephone number is 703-605 4242. The examiner can normally be reached on Monday-Friday, 7:00 Am - 3:30 Pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VU, KIM YEN can be reached on 703-305 4393. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746 7239

for regular communications and 703-746 7238 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305 3900.

Examiner: Hung Pham

July 16, 2002



SHAHID AL ALAM
PATENT EXAMINER